



#4

1

## SEQUENCE LISTING

<110> SONG, WEN-YUAN  
PI, LI-YA

<120> UBIQUITIN LIGASE

<130> 5853-173

<140> 09/896,720

<141> 2001-06-29

<150> 60/215,049

<151> 2000-06-29

<160> 24

<170> PatentIn Ver. 2.1

<210> 1

<211> 1353

<212> DNA

<213> Oryza sativa

<400> 1

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cgcgccaccc tctacgaccg cctctccgct ctccacatcg ccgccgcaa tggccgcac 180
gaggtgctct ccatgttctt ggatcgcggg gcgcgcgcgg acgcggtgaa tcggcacaag 240
cagacgccgc tgatgctcgc ggccatgcac ggcaagatcg actgctgtct caagctcctc 300
caggccgacg caaatatctt gatgttcgac tcggtgcacg cgaggacctg cctccaccac 360
gcgcgctact acggccacgt cgactgctg caggccatcc tcgccgccgc gcagaccacg 420
ccggtggccg actcatgggg tttcgcccg ttcgtcaacg tcagggacga ccacggcgcc 480
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catttggtcg ctctgtagcg gaacttggat tgcacagga agctgcttgc ctggggagct 660
gatcggtctc aaagggatc ggctgggaga attccctatt ctgttgctgc gaaacggaac 720
catggagcat gtgcagcttt gctgaacctt acatcagcag agcccatggt gtggccatcc 780
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<210> 2

<211> 450

<212> PRT

<213> Oryza sativa

&lt;220&gt;

&lt;221&gt; MOD\_RES

&lt;222&gt; (258)

&lt;223&gt; Any amino acid

&lt;400&gt; 2

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gly | His | Gly | Val | Ser | Cys | Ala | Arg | Thr | Gly | Asp | Glu | His | Asp | Phe | 1   | 5   | 10  | 15  |
| Phe | Arg | Ala | Ala | His | Leu | Gly | Asp | Leu | Asp | Ala | Leu | Ala | Ala | Leu | Leu | 20  | 25  | 30  |     |
| Ala | Ala | Asp | Pro | Ser | Leu | Ala | Arg | Arg | Ala | Thr | Leu | Tyr | Asp | Arg | Leu | 35  | 40  | 45  |     |
| Ser | Val | Leu | His | Ile | Ala | Ala | Ala | Asn | Gly | Arg | Ile | Glu | Val | Leu | Ser | 50  | 55  | 60  |     |
| Met | Phe | Leu | Asp | Arg | Gly | Ala | Pro | Pro | Asp | Ala | Val | Asn | Arg | His | Lys | 65  | 70  | 75  | 80  |
| Gln | Thr | Pro | Leu | Met | Leu | Ala | Ala | Met | His | Gly | Lys | Ile | Asp | Cys | Val | 85  | 90  | 95  |     |
| Leu | Lys | Leu | Leu | Gln | Ala | Asp | Ala | Asn | Ile | Leu | Met | Phe | Asp | Ser | Val | 100 | 105 | 110 |     |
| His | Ala | Arg | Thr | Cys | Leu | His | His | Ala | Ala | Tyr | Tyr | Gly | His | Val | Asp | 115 | 120 | 125 |     |
| Cys | Leu | Gln | Ala | Ile | Leu | Ala | Ala | Ala | Gln | Thr | Thr | Pro | Val | Ala | Asp | 130 | 135 | 140 |     |
| Ser | Trp | Gly | Phe | Ala | Arg | Phe | Val | Asn | Val | Arg | Asp | Asp | His | Gly | Ala | 145 | 150 | 155 | 160 |
| Thr | Pro | Leu | His | Leu | Ala | Ala | Arg | Gln | Gly | Arg | Pro | Gly | Cys | Val | Gln | 165 | 170 | 175 |     |
| Val | Leu | Leu | Glu | Asn | Gly | Ala | Ile | Val | Ser | Ala | Leu | Thr | Gly | Ser | Tyr | 180 | 185 | 190 |     |
| Gly | Phe | Pro | Gly | Ser | Thr | Ser | Leu | His | Leu | Ala | Ala | Arg | Ser | Gly | Asn | 195 | 200 | 205 |     |
| Leu | Asp | Cys | Ile | Arg | Lys | Leu | Leu | Ala | Trp | Gly | Ala | Asp | Arg | Leu | Gln | 210 | 215 | 220 |     |
| Arg | Asp | Ser | Ala | Gly | Arg | Ile | Pro | Tyr | Ser | Val | Ala | Leu | Lys | Arg | Asn | 225 | 230 | 235 | 240 |
| His | Gly | Ala | Cys | Ala | Ala | Leu | Leu | Asn | Pro | Thr | Ser | Ala | Glu | Pro | Met | 245 | 250 | 255 |     |
| Val | Xaa | Pro | Ser | Pro | Leu | Lys | Phe | Ile | Ser | Glu | Leu | Glu | Pro | Glu | Ala | 260 | 265 | 270 |     |

Lys Ala Leu Leu Glu Ala Ala Leu Met Glu Ala Asn Arg Glu Arg Glu  
           275                                  280                                  285  
 Lys Lys Ile Leu Asn Gly Thr Lys Tyr Ser Leu Pro Ser Pro Ser Pro  
           290                                  295                                  300  
 Gly Asp Asp Ser Ala Asp Asp Asp Ala Cys Ser Glu Val Ser Asp Thr  
   305                                  310                                  315                                  320  
 Glu Leu Cys Cys Ile Cys Phe Asp Gln Ala Cys Thr Ile Glu Val Gln  
                                   325                                  330                                  335  
 Asp Cys Gly His Gln Met Cys Ala Pro Cys Thr Leu Ala Leu Cys Cys  
                                   340                                  345                                  350  
 His Asn Lys Pro Asn Pro Thr Thr Leu Thr Pro Pro Ser Pro Ala Cys  
                                   355                                  360                                  365  
 Pro Phe Cys Arg Gly Ser Ile Ser Arg Leu Val Val Ala Gln Thr Arg  
           370                                  375                                  380  
 Ser Ala Cys Asp Pro Asp Lys Pro Ser Ser Leu Gln Leu Thr Arg Lys  
   385                                  390                                  395                                  400  
 Arg Ser Arg Arg Ser His Asn Leu Ser Glu Gly Ser Ser Ser Phe Lys  
                                   405                                  410                                  415  
 Gly Leu Pro Ser Ala Met Gly Ser Phe Ser Lys Leu Gly Arg Gly Ser  
                                   420                                  425                                  430  
 Ser Arg Met Ala Asp Ser Asp Ser Ser Asn Leu Asp Lys Pro Glu His  
           435                                  440                                  445  
 Asp Leu  
       450

<210> 3  
 <211> 29  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 3  
 gtcgaccaga tctcataaga gaagaaaga

29

<210> 4  
 <211> 31  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 4  
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<210> 5  
<211> 35  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence: Primer

<400> 5  
ggatccgctcg accacaagag aactaaaaag ggagc 35

<210> 6  
<211> 42  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence: Primer

<400> 6  
ggatccgctcg accccgggca gaagtcgata tgaagtgtgg ca 42

<210> 7  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer

<400> 7  
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<210> 8  
<211> 31  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence: Primer

<400> 8  
cgggatccga tatcagatgc agcaaagctc c 31

<210> 9  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer

<400> 9  
ggatccgcac aagagaacta aaaagggagc 30

<210> 10  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer

<400> 10  
cagaagtcga tctgaagtgt ggca 24

<210> 11  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer

<400> 11  
ggatccatga tatccgatgc atgctcagag 30

<210> 12  
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<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer

<400> 12  
ggatccatga tatcgaggat gatgcggcga 30

<210> 13  
<211> 28  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer

<400> 13  
gaattctcta gaccggggca gcatctca 28

<210> 14  
<211> 29  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer

<400> 14  
actagtggat cctttctgat accaacgga 29

<210> 15  
<211> 28  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer

<400> 15  
gaattcagat ctccggggca gcatctca 28

<210> 16  
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<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer

<400> 16  
actagtgata tctttctgat accaacgga 29

<210> 17  
<211> 17  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer

<400> 17  
gaattcgcgc tgctctc 17

<210> 18  
<211> 17  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence: Primer

<400> 18  
ggtgcatgct ccaatgg 17

<210> 19  
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<223> Description of Artificial Sequence: Primer

<400> 19  
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<210> 20  
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<220>

<223> Description of Artificial Sequence: Primer

<400> 20  
 gcttctgggt caagctcact ga 22

<210> 21  
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<223> Description of Artificial Sequence: Primer

<400> 21  
 tgtgcagctt tgctgaaccc tacatca 27

<210> 22  
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 <212> PRT  
 <213> Oryza sativa

<400> 22  
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 Lys Pro Asn Pro Thr Thr Leu Thr Pro Pro Ser Pro Ala Cys Pro Phe  
 35 40 45  
 Cys Arg  
 50

<210> 23  
 <211> 40  
 <212> PRT  
 <213> Homo sapiens

<400> 23  
 Cys Lys Ile Cys Ala Glu Asn Asp Lys Asp Val Lys Ile Glu Pro Cys  
   1                  5                  10                  15  
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                   20                  25                  30  
 Gly Gln Gly Cys Pro Phe Cys Arg  
           35                  40

<210> 24  
 <211> 36  
 <212> PRT  
 <213> Unknown Organism

<220>  
 <223> Description of Unknown Organism: Baculovirus  
       inhibitor of apoptosis

<400> 24  
 Cys Lys Ile Cys Tyr Val Glu Glu Cys Ile Val Cys Phe Val Pro Cys  
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 Gly His Val Val Ala Cys Ala Lys Cys Ala Leu Ser Val Asp Lys Cys  
                   20                  25                  30  
 Pro Met Cys Arg  
       35